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Inspection
Service



Cattle Fever Tick Eradication Program

Environmental Assessment, January 2000

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I. Need for the Proposal

A. Introduction

The cattle fever tick, *Boophilus annulatus*, and the southern cattle tick, *Boophilus microplus*, are members of the genus *Ixodidae*. These species once occurred in large areas of the United States, and still occur in Mexico and throughout the tropical and subtropical areas of the Western Hemisphere. They are also vectors of protozoan parasites of the genus *Babesia* which are the causative agents of babesiosis. Babesiosis is caused by any one of many *Babesia* species which infect a wide variety of vertebrate hosts, including domestic and wild animals, as well as humans. These ticks and their associated diseases, especially Bovine babesiosis or cattle fever, pose serious problems to warm-blooded animals, causing injuries and death of livestock and domestic animals. Less severe cases may be characterized by weight loss and secondary bacterial infections.

Spanish colonists brought the cattle fever tick to the New World and cattle fever disease through the introduction of tick-infested cattle. Historically, major losses to susceptible cattle resulting from cattle fever were noted during large longhorn cattle drives involving infested but disease resistant livestock. The concern of cattlemen over those losses resulted in organized opposition to movement of herds across certain lands. One of the most famous incidents occurred in 1881 when Charles Goodnight drew a figurative line in the Texas Panhandle and warned south Texas cattlemen not to cross that line with their longhorns. This armed quarantine became known as the “Winchester Quarantine.” Similar threats, intimidation, and violence provided good justification for government intervention in controlling the disease risk from cattle ticks.

In 1906, the U.S. Congress initiated a tick eradication program. At that time, direct and indirect economic losses caused by cattle fever ticks were estimated to be \$130.5 million (equivalent to over \$3 billion in 1999). Within 55 years, the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) had eradicated the cattle tick from the United States. These ticks are well established in Mexico, where they cause losses to livestock and serve as a continuing source of infestation for eradicated areas of the United States in Texas along the Rio Grande River from the Gulf of Mexico north to Del Rio due to movement of feral, stray, and smuggled animals.

The severe risk to livestock and wildlife that results from the entry into the United States of an animal infested with cattle ticks makes it necessary for APHIS to maintain an effective barrier to ensure that introductions are discovered in a timely manner and that any risk of spread of ticks from the infested host is prevented.

The Cattle Fever Tick Eradication program maintains a permanent buffer or quarantine zone of approximately 800 km in length and 0.4 to 16 km in width.

B. Purpose and Need

Continual movement of livestock across the border from Mexico to the United States has resulted in elevated likelihood of cattle tick reintroductions to the United States. Tick control efforts in Mexico have not been successful. About 50% of the bovine and 20% of the equine apprehended during illegal entry into the United States from Mexico are found to be infested with cattle fever ticks. The possible survival and spread of cattle fever tick in the United States poses a high level of risk to the cattle industry of the surrounding community. The ultimate goal of the Cattle Fever Tick Eradication Program is the elimination of pathways of entry of cattle fever ticks to the United States. Success of the program prevents exposure of U.S. livestock to babesiosis and allows the importation of cattle from Mexico without posing a risk of infection to U.S. cattle. Program activities are designed to achieve the program goals of: (1) maintaining the quarantine areas; (2) carrying out surveillance and apprehension of livestock and horses carrying cattle fever ticks; and (3) eradicating ticks on animals in pastures when exposure does occur.

Delays in treatment increase the possibility that ticks could spread to other hosts or grazing sites in the surrounding areas. The opportunistic nature of the cattle fever tick in these site-specific situations makes it critical that action begin immediately to eliminate any pest risk. The urgency of response to actual pest risk in Texas is elevated because the cattle fever tick has historically been known to breed year-round in those areas where average winter temperatures are not cold enough to affect survival. The climate in much of the southern United States is conducive to tick survival and reproduction. In response to the elevated threat of infestation of cattle fever ticks to livestock and wildlife in the United States, APHIS participates cooperatively with the Texas Animal Health Commission in the treatment of animals that could harbor cattle fever ticks. The maintenance of trails used in apprehension of stray animals crossing the border into the quarantine area is strictly an APHIS function.

APHIS has responsibility for taking actions to exclude, eradicate, and/or control agricultural pests such as cattle fever ticks. The statutory authority for conducting this program in cooperation with the State agencies is contained in the Talmadge-Aiken Act (7 U.S.C. 450); and in 21 U.S.C. 111, 114, 123, and 134. APHIS' authority for regulatory action in this program is based upon 7 CFR Part 2.80, which authorizes the implementation of programs to exclude, control, and eradicate insect pests that serve as agents of animal disease.

The ongoing nature of this program (since 1906) and recent changes in the nature of the program area (particularly related to land management issues) have elevated the need for environmental review and documentation of potential program actions. This environmental assessment (EA) has been prepared to satisfy the provisions of the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4327 (NEPA)) and the Council on Environmental Quality's Regulations for implementing the Procedural Provisions of NEPA.

II. Alternatives

The two alternatives considered for exclusion of cattle fever ticks from the United States are: (1) no Federal action, and (2) the cattle fever tick eradication program (the preferred alternative). The scope of alternatives is limited necessarily by the need for ongoing action; however, flexibility exists within the framework of the kinds of actions that are possible within the preferred alternative. The possible actions applied to each alternative are described in this chapter and the potential environmental impacts associated with these alternatives are presented in chapter III.

A. No Federal Action

The No Federal Action alternative would be characterized by no action to maintain, clear, or utilize trails in the monitoring of border areas for stray or smuggled animals that could carry the cattle fever ticks. The lack of apprehension and treatment of stray or smuggled animals would limit the ability to prevent reinfestation of surrounding areas. In addition, wildlife would become a source for spread of the ticks and tick-borne disease. This limitation would increase the likelihood of reintroduction of cattle ticks to sites eradicated for over 30 years and of commensurately greater spread of diseases (e.g. cattle tick fever) vectored by these ectoparasites. The advantages to the cattle industry from previous eradication efforts to eliminate this pest from the continental United States would be lost if a new infestation were to be inadequately controlled and the ticks spread from border areas to cattle production areas. Some herds just outside the quarantine zone in Texas have occasionally had infestations despite the program actions. The frequency and intensity of these outbreaks would be expected to increase dramatically if apprehension of infested stray livestock were not continued. The trails cleared by the program would readily become overgrown and become inaccessible for tick riders or for other agencies that use the trail system. Any efforts to maintain the current eradication efforts would depend upon State or local governments whose resources could be inadequate to prevent spread of the cattle fever ticks to adjacent areas of the United States.

B. Cattle Fever Tick Eradication Program (Preferred Alternative)

The Cattle Fever Tick Eradication Program alternative is a continuation of the current program. The program would continue to maintain all trails that have been actively cleared by the program since 1938. A permanent quarantine buffer zone is maintained by horse mounted patrol inspectors covering over 900 miles of trails. The clearing and maintenance of these trails is limited to sufficient width for safe passage of a tick rider on horseback for surveillance and apprehension of any stray animals that could be infested with cattle fever ticks. The clearing is done primarily with hand tools, but damage to trails from major storms requires the occasional use of heavy equipment for path maintenance. The use of these trails is not limited to APHIS personnel but includes the Border Patrol (INS) and land management agencies, such as the U.S. Fish and Wildlife Service (FWS), that regulate activities on National Wildlife Refuge lands. The multiple uses of these areas make good cooperation with these agencies important to the effective maintenance of the trail system. The ongoing nature of these actions to exclude cattle fever ticks from being reintroduced to the United States requires that all necessary planning documentation be prepared in advance to allow the required actions to proceed in a timely manner.

Inspectors also examine livestock in free areas adjoining the quarantine zone whenever possible. Surveillance is conducted at all southern Texas livestock markets on days of sale to ensure that no further spread of the ticks occurs. Any reports of infested animals by veterinarians or ranchers are investigated to eliminate potential pest risks.

Regardless of location, all tick-infested livestock or exposed premises are quarantined for a period of 6 to 9 months, depending on the time of year that treatment of the animals begins. Owners have the options of treating their animals biweekly for the duration of the quarantine period or of completely vacating the premises for the same 6- to 9-month quarantine period. The quarantine period begins after at least two inspections and dippings of the livestock, the last of which reveals no ticks. Any stray Mexican animals apprehended by the tick riders are transported to quarantine facilities. Stray animals that are claimed by owners may be obtained from program personnel after treatment by paying the feed bills. Any stray animals not claimed are sold at auction. Infested animals are treated by dipping in approved pesticides. Before any livestock are allowed to leave the quarantine areas, they must: (1) be found to be free of ticks; (2) given a precautionary dipping with an approved acaricide; and (3) issued a permit for movement.

Disinfection of potentially infested materials is done by treatment with registered formulations of chlorpyrifos (Dursban®). The stock trailers used to transport infested livestock are disinfected after unloading. The holding pens, corrals, and cattle barns are disinfected after infested animals are treated in the dip vats.

Program eradication procedures must consider also the potential spread of cattle ticks through wildlife. Although cattle ticks can infest antelope, red deer, and elk within the quarantine zone, the white-tailed deer are the most likely source of infested wildlife within these areas in south Texas. The infested wildlife have created an ongoing difficulty for the program control and eradication of cattle fever ticks. Direct treatment of populations of white-tailed deer is not an option. An Investigational New Animal Drug authorization for experimental use of an animal drug (INAD) was approved by the U.S. Food and Drug Administration (FDA) for limited use of ivermectin by USDA's Agricultural Research Service (ARS) as medication in feed for control of fever ticks in white-tailed deer, and has proven highly successful in the eradication of cattle fever ticks from deer and exotic ungulates during extensive field trials. Impacts of the possible future use of medicated feed in this program are analyzed in this EA contingent upon FDA authorization for use.

III. Environmental Consequences

A. No Federal Action

A lack of Federal action in the control of cattle ticks in south Texas could provide the impetus for greater infestations and movement of the ticks to surrounding areas. Over the past 40 years, detected tick infestations in the eradication zone of south Texas have varied from one infestation per year in 1962 to as many as 170 infestations in 1973. Each of these infestations had the potential to spread cattle ticks to other cattle on adjacent ranches and to introduce ticks at new locations through cattle auctions and transport. The advent of modern transportation has speeded the dissemination of cattle ticks, and infested animals continue to be detected through auction sales, inspection of stray or smuggled animals apprehended near the border, and quarantine procedures for importation of livestock from Mexico. Cattle ticks are opportunistic pests that have high reproductive potential and high capacity to spread. Limited introductions, such as the infestation in 1962, might not pose major threats to wildlife or cattle herds in south Texas, but larger incidents like that in 1973 could threaten the tick-free zones and reinfest areas that have had no tick problems for the last 60 years.

Required treatments of infested domesticated animals, under this alternative, would prevent some reinfestation. However, the lack of apprehension and treatment of stray or smuggled animals on trails near the border, under this alternative, would provide a tick reservoir for reinfestation of south Texas with high likelihood of spread of both cattle fever ticks and cattle fever to other areas of the country. In addition, dissemination by wildlife would become a more critical source for spread of the ticks and tick-borne disease. All of the areas eradicated of cattle ticks would become reinfested over time.

Although State and local governments could take over the efforts presently done through Federal action, the available resources to these governmental entities are anticipated to be more limited. The trained personnel, financial resources, program supplies (e.g., horses, trail-clearing implements, stray apprehension materials), and program infrastructure presently reside with APHIS. The responsibility for continuing to eliminate entry of cattle ticks on stray animals from Mexico is a crucial part of preventing permanent reinfestation throughout south Texas. Transition of authority for such important actions from Federal to State or local control is possible, but continuing effective maintenance of the intensive eradication effort might not be ensured. Also, transition of authority does not ensure that pockets of infestation on Federal refuge lands would be treated.

In addition to consideration of greater pest risks to livestock and wildlife from this alternative, there are other potential impacts relating primarily to the usage of trails. If trails were not maintained under this alternative, the physical clearing, soil compaction, and droppings from horseback would be expected to diminish at program trail sites. The physical clearing actions are presently done in cooperation with other trail users at some sites and the clearing at those locations would not change. Other sites would be expected to have steady growth of brush until former remnants of the trail become no longer identifiable. These effects on overall vegetation would be minimal.

Soil compaction would diminish at all sites, but this effect in the ongoing program has primarily assisted in maintaining trail conditions by decreasing the rate at which vegetation grows across horse pathways. Decreasing frequency of soil compaction would allow for more rapid growth of vegetation in and along the trails. The fecal droppings from horses along trails have had minimal environmental impact because the small quantity degrades readily and contamination from this source has not been shown to adversely affect adjacent soil or water resources. Elimination of the horses used on the program trails would have little, if any, effect on the environmental quality.

B. Cattle Fever Tick Eradication Program

Continuation of the Cattle Fever Tick Eradication Program would continue all actions related to apprehension of stray livestock, inspection and quarantine of imported livestock, inspection of cattle at auction barn sales in the border areas, and treatment of infested cattle and other livestock. The primary benefit is that this alternative ensures low pest risk and eliminates most potential routes for reinfestation of areas free of cattle ticks. The mortality rate among affected cattle in 1868 was approximately 90%. The direct and indirect economic losses from cattle fever ticks in 1906 were determined to be the current 1999 equivalent of \$3 billion annually. This program has eliminated those losses of stock and production to cattle ranches and precludes concerns that led to the armed quarantines imposed by some ranchers in the past. Losses associated with potentially infested wildlife (i.e., deer) have also diminished dramatically as a result of program actions.

Environmental impacts of tick eradication trails relate primarily to the physical impacts of removal of vegetation. These trails have been cleared and maintained since 1938. The ongoing clearing of these trails results in no net change in the vegetation from previous years. In other words, the impacts to vegetation from the initial clearing of the trail are maintained in future program efforts, such that safe horseback access is afforded to the tick program riders surveying the trail for potentially infested stray livestock. Maintenance of these trails by APHIS involves routine use of hand tools in the clearing of new growth. Occasionally, storm damage requires the use of heavy equipment to clear sections of the trails. Use of heavy equipment may result in some soil compaction, but rapid return to the pre-storm trail conditions would be expected at these sites because this method of clearing would not be routine or a continuing process on any given trail. Program trail maintenance does not include any herbicide applications for weed control or other pesticide applications for tick control along trails, so impacts related to these uses do not apply to this program.

Trail usage by horses and tick program riders can affect soil compaction and some environmental quality criteria. Soil compaction from previous trail use has actually assisted the program in maintaining trail conditions by decreasing the rate at which vegetation grows across pathways. The frequency of this compaction due to program trail use is not expected to result in effects that would permanently affect soil quality or prevent growth of new vegetation when maintenance of a program trail is no longer needed. The fecal droppings from horses along trails have had minimal environmental impact because the small quantity degrades readily and contamination from this source is not expected to adversely affect adjacent soil or water resources.

All program-approved pesticide use patterns are registered with the U.S. Environmental Protection Agency. Stray animals and Infested animals are treated through exposure to either coumaphos or permethrin in dip vats. Disinfection of potentially infested materials is done by treatment with registered formulations of chlorpyrifos (Dursban®). The stock trailers used to transport infested livestock are disinfected after unloading. The holding pens, corrals, and cattle barns are disinfected after infested animals are treated in the dip vats.

Coumaphos is currently undergoing reregistration proceedings related to the Food Quality Protection Act for all pesticide use patterns. It is expected that the continuing use in dip vats will be approved. Coumaphos is of moderate to severe acute oral toxicity to mammals, but it is readily excreted. Coumaphos has very low vapor pressure and would not be expected to affect air quality.

Program applicators, mixers, and loaders are required to wear proper protective clothing and gear to preclude any adverse human health effects. Coumaphos readily binds to soil organic matter. Hazards are negligible from residues spread by treated animals leaving the dip vats. Proper cleaning and thorough bioremediation of dip vat contents are required by the program before disposal to ensure no potential contamination of soil or groundwater with coumaphos residues.

Program disinfections of premises and potentially infested materials using chlorpyrifos pose several potential environmental impacts. Hazards to air quality from disinfections are negligible due to the relatively low vapor pressure of chlorpyrifos. Chlorpyrifos has a long half-life on soil, but hazards are low to negligible from treatments to premises and fomites. Chlorpyrifos is of moderate acute oral toxicity to mammals, but proper protective gear precludes exposure. Chlorpyrifos is excreted readily following any exposure. There is low acute hazard to program applicators, mixers, and loaders of chlorpyrifos. Chlorpyrifos is of moderate to severe acute toxicity to birds. Hazards to birds are slight to moderate from potential exposure routes, but most premises and fomites are not expected to have birds present. Likewise, reptiles and terrestrial amphibians would not be expected to be present. Chlorpyrifos is of severe acute toxicity to most nontarget terrestrial invertebrates. There is low to moderate hazard for most terrestrial invertebrates with proper handling of chlorpyrifos, but any invertebrates directly treated with chlorpyrifos would be expected to suffer mortality.

Authorization of an INAD by the FDA for use of feed medicated with ivermectin for deer as a treatment for cattle ticks is possible for APHIS and ARS if all requirements for application can be satisfied. Results obtained under the previous INAD for this use pattern indicate that this medicated feed is effective at controlling cattle fever ticks. Placement of the medicated feeds for deer would be in elevated troughs where other wildlife (e.g., wild hogs) could be prevented from

consumption. Ivermectin is not metabolized by deer or other livestock. It is eliminated in the feces for several weeks after treatment. Ivermectin is subject to photolysis on exposed surfaces and has a half-life in soil of approximately 1 month. Residual ivermectin in fecal material would be expected to completely degrade as the residues in the fecal materials are exposed to sunlight. Potential adverse effects from these fecal materials would be expected to be limited to include toxicity and mortality to any invertebrates consuming the fecal waste. This could include some flies, wasps, dung beetles, and carrion beetles. Elimination of residual ivermectin would have to be sufficient in the animals to meet tolerances before slaughter or hunting of the treated wildlife could be allowed.

1. Environmental Justice

Consistent with Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” APHIS considered the potential for disproportionately high and adverse human health or environmental effects on any minority populations and low-income populations. The movement of stray animals or other livestock from Mexico where cattle fever ticks are established is an occurrence that does not specifically affect any subgroup of the population. The tick eradication trails are established at known border location where infested animals may enter the country. The properties affected by trail maintenance and clearing activities include primarily Federal lands and private properties. These trails have been in existence since 1938 and continuing their upkeep maintains present conditions. Treatments of infested livestock or wildlife would not be expected to adversely affect any specific subgroups of the population. The natures of all program actions do not affect any specific subgroups of the population differently from others. Therefore, no disproportionate effects on such populations are anticipated as a consequence of implementing the preferred action.

2. Endangered and Threatened Species

The Endangered Species Act of 1973 (ESA) as amended (16 U.S.C. 1531 *et seq.*) requires all Federal departments and agencies to consult with the U.S. Department of the Interior’s FWS and/or the U.S. Department of Commerce’s National Marine Fisheries Service (NMFS) to ensure that any action that they authorize, fund, or carry out is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of its critical habitat (16 U.S.C. 1536(a)(2)). A list of the endangered, threatened, and proposed species in Texas counties that are part of the Cattle Fever Tick Eradication Program is presented in appendix A. Most agency actions related to trail maintenance efforts are expected to occur in highly disturbed areas that would not be suitable habitats for most endangered and threatened species. The agency is, however, aware that these areas may serve as habitat for migratory birds or native cats. Treatments of livestock for cattle ticks occur at dip vats where endangered and threatened species would not be expected to be present, and the strict supervision of treatments and disposal of wastes

prevents any potential adverse effects to these species. Any ivermectin-medicated corn feed provided to white-tailed deer would not be readily accessible to other species. No other wildlife are expected to be affected by this program action except those invertebrates that consume fecal material of the treated animals. This includes primarily some flies, wasps, dung beetles, and carrion beetles. None of the dung-consuming species present in program areas in south Texas are known to be threatened or endangered. APHIS will consult with FWS and/or NMFS regarding endangered and threatened species for each new brush clearing effort or other change in program actions and will comply with all protection measures stipulated in that consultation and mutually agreed on with FWS and/or NMFS.

3. Other Issues The other issues related to the Cattle Fever Tick Eradication Program relate primarily to common trail usage with other governmental entities and agencies. The use of the program trails by other organizations would result in greater compaction of soil from additional usage and expanded clearing of vegetation at some locations, particularly at sites where the Border Patrol is seeking clear views of potential sites used as illegal border crossings. The cumulative impact of these activities at the same site would, however, still be slight and the effects on vegetation of temporary duration until the governmental actions at these locations cease. Some of the tick eradication trails cross lands managed by the U.S. FWS. Although disturbance of vegetation is minimal for routine maintenance of trails, larger efforts to clear paths following storm damage to trails could be disruptive to nesting birds and other wildlife. Although most wildlife benefits from eradication of the cattle tick, which is not native to North America, it is desirable for APHIS to cooperate with other agencies, such as FWS, on common use land to ensure that their concerns are addressed prior to taking action. None of the tick eradication trails established since 1938 cross any identified archaeological sites of concern. Although program trail maintenance is close to the Rio Grande River and within the watershed, there are no effects from this trail work expected on nearby flood control projects of the U.S. Army Corps of Engineers or on State compliance with the Coastal Zone Management Act.

Consideration was also given to compliance issues related to Executive Order 13045, "Protection of Children From Environmental Health Risks and Safety Risks." Based upon review of the exposure and hazard issues of the Cattle Fever Tick Eradication Program, it was determined that this program does not pose any disproportionately high environmental health risks or safety risks to children because children don't have access to the treatment facilities and most trail work occurs at isolated locations not frequented by children.

IV. Listing of Agencies and Persons Consulted

U.S. Department of Agriculture
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Appendix A. SPECIES BY COUNTY FOR CATTLE FEVER TICK ERADICATION PROGRAM

Migratory Species Common to Many or All Counties: Species listed specifically in a county have confirmed sightings. If a species is not listed they may occur as migrants in those counties.

American peregrine falcon	(E)	<i>Falco peregrinus anatum</i>
Least tern	(E)	<i>Sterna antillarum</i>
Whooping crane	(E)	<i>Grus americana</i>
Bald eagle	(T)	<i>Haliaeetus leucocephalus</i>
Piping plover	(T)	<i>Charadrius melodus</i>

Species not added to the Texas list but Federal Register notice includes Texas as an area of occurrence.

Jaguar	(E)	<i>Panthera onca</i>
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Cameron County

Jaguarundi	(E)	<i>Felis yagouaroundi cacomitli</i>
Ocelot	(E)	<i>Felis pardalis</i>
West Indian manatee (=Florida)	(E)	<i>Trichechus manatus</i>
American peregrine falcon	(E)	<i>Falco peregrinus anatum</i>
Brown pelican	(E)	<i>Pelecanus occidentalis</i>
Northern aplomado falcon	(E)	<i>Falco femoralis septentrionalis</i>
Hawksbill sea turtle	(E w/CH‡)	<i>Eretmochelys imbricata</i>
Kemp's Ridley sea turtle	(E)	<i>Lepidochelys kempii</i>
Leatherback sea turtle	(E w/CH‡)	<i>Dermochelys coriacea</i>
South Texas ambrosia	(E)	<i>Ambrosia cheiranthifolia</i>
Star cactus	(E)	<i>Astrophytum asterias</i>
Texas ayenia	(E)	<i>Ayenia limitaris</i>
Bald eagle	(T)	<i>Haliaeetus leucocephalus</i>
Piping plover	(T)	<i>Charadrius melodus</i>
Green sea turtle	(T)	<i>Chelonia mydas</i>
Loggerhead sea turtle	(T)	<i>Caretta caretta</i>
Mountain plover	(PT)	<i>Charadrius montanus</i>

Dimmit County

Jaguarundi	(E)	<i>Felis yagouaroundi cacomitli</i>
Ocelot	(E)	<i>Felis pardalis</i>
Mountain plover	(PT)	<i>Charadrius montanus</i>

Hidalgo County

American peregrine falcon	(E)	<i>Falco peregrinu anatum</i>
Northern aplomado falcon	(E)	<i>Falco femoralis septentrionalis</i>
Jaguarundi	(E)	<i>Felis yagouaroundi cacomitli</i>
Ocelot	(E)	<i>Felis pardalis</i>
Star cactus	(E)	<i>Astrophytum asterias</i>
Texas ayenia	(E)	<i>Ayenia limitaris</i>
Walker's manioc	(E)	<i>Manihot walkerae</i>
Mountain plover	(PT)	<i>Charadrius montanus</i>

Jim Hogg County

Jaguarundi	(E)	<i>Felis yagouaroundi cacomitli</i>
Ocelot	(E)	<i>Felis pardalis</i>

Kinney County (Edwards Aquifer county) ***

Black-capped vireo	(E)	<i>Vireo atricapillus</i>
Golden-cheeked warbler	(E)	<i>Dendroica chrysoparia</i>
Texas snowbells	(E)	<i>Styrax texana</i>
Tobusch fishhook cactus	(E)	<i>Ancistrocactus tobuschii</i>
Bald eagle	(T)	<i>Haliaeetus leucocephalus</i>

***Edwards Aquifer species: (Edwards Aquifer County) refers to those six counties within the Edwards Aquifer region. The Edwards Aquifer underlies portions of Kinney, Uvalde, Medina, Bexar, Hays, and Comal Counties (Texas). The Service has expressed concern that the combined current level of water withdrawal for all consumers from the Edwards Aquifer adversely affects aquifer-dependent species located at Comal and San Marcos springs during low flows. Deterioration of water quality and/or water withdrawal from the Edwards Aquifer may adversely affect eight federally-listed species.

Comal Springs riffle beetle	(E)	<i>Heterelmis comalensis</i>
Comal Springs dryopid beetle	(E)	<i>Stygoparnus comalensis</i>
Fountain darter	(E)	<i>Etheostoma fonticola</i>
Peck's cave amphipod	(E)	<i>Stygobromus pecki</i>
San Marcos gambusia	(E)	<i>Gambusia georgei</i>
San Marcos salamander	(T)	<i>Eurycea nana</i>
Texas wild-rice	(E)	<i>Zizania texana</i>
Texas blind salamander	(E)	<i>Typhlomolge rathbuni</i>

Maverick County

Jaguarundi	(E)	<i>Felis yagouaroundi cacomitli</i>
Ocelot	(E)	<i>Felis pardalis</i>
Mountain plover	(PT)	<i>Charadrius montanus</i>

Starr County

Ocelot	(E)	<i>Felis pardalis</i>
Jaguarundi	(E)	<i>Felis yagouaroundi cacomitli</i>
Least tern	(E)	<i>Sterna antillarum</i>
Ashy dogweed	(E)	<i>Thymophylla tephroleuca</i>
Johnston's frankenia	(E)	<i>Frankenia johnstonii</i>
Star cactus	(E)	<i>Astrophytum asterias</i>
Walker's manioc	(E)	<i>Manihot walkerae</i>
Zapata bladderpod	(PE)	<i>Lesquerella thamnophila</i>

Val Verde County

American peregrine falcon	(E)	<i>Falco peregrinus anatum</i>
Black-capped vireo	(E)	<i>Vireo atricapillus</i>
Brown pelican	(E)	<i>Pelecanus occidentalis</i>
Least tern	(E)	<i>Sterna antillarum</i>
Texas snowbells	(E)	<i>Styrax texana</i>
Tobusch fishhook cactus	(E)	<i>Ancistrocactus tobuschii</i>
Devils River minnow	(PE)	<i>Dionda diaboli</i>
Bald eagle	(T)	<i>Haliaeetus leucocephalus</i>
Mountain plover	(PT)	<i>Charadrius montanus</i>

Webb County

Jaguarundi	(E)	<i>Felis yagouaroundi cacomitli</i>
Ocelot	(E)	<i>Felis pardalis</i>
Least tern	(E)	<i>Sterna antillarum</i>
Ashy dogweed	(E)	<i>Thymophylla tephroleuca</i>
Johnston's frankenia	(E)	<i>Frankenia johnstonii</i>
Mountain plover	(PT)	<i>Charadrius montanus</i>

Willacy County

Jaguarundi	(E)	<i>Felis yagouaroundi cacomitli</i>
Ocelot	(E)	<i>Felis pardalis</i>
West Indian manatee (=Florida)	(E)	<i>Trichechus manatus</i>
American peregrine falcon	(E)	<i>Falco peregrinus anatum</i>
Brown pelican	(E)	<i>Pelecanus occidentalis</i>
Northern aplomado falcon	(E)	<i>Falco femoralis septentrionalis</i>
Hawksbill sea turtle	(E w/CH‡)	<i>Eretmochelys imbricata</i>
Kemp's Ridley sea turtle	(E)	<i>Lepidochelys kempii</i>
Leatherback sea turtle	(E w/CH‡)	<i>Dermochelys coriacea</i>
Green sea turtle	(T)	<i>Chelonia mydas</i>
Loggerhead sea turtle	(T)	<i>Caretta caretta</i>
Piping plover	(T)	<i>Charadrius melodus</i>
Mountain plover	(PT)	<i>Charadrius montanus</i>

Zapata County

Jaguarundi	(E)	<i>Felis yagouaroundi cacomitli</i>
Ocelot	(E)	<i>Felis pardalis</i>
Least tern	(E)	<i>Sterna antillarum</i>
Ashy dogweed	(E)	<i>Thymophylla tephroleuca</i>
Johnston's frankenia	(E)	<i>Frankenia johnstonii</i>
Zapata bladderpod	(PE)	<i>Lesquerella thamnophila</i>

DEFINITIONS OF LISTINGS

(CH) = critical habitat

(E) = endangered

(PE) = proposed endangered

(PT) = proposed threatened

(T) = threatened

**Finding of No Significant Impact
for
Cattle Fever Tick Eradication Program,
Environmental Assessment, January 2000**

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), has prepared an environmental assessment (EA) that analyzes alternatives for the detection and eradication of the cattle ticks, *Boophilus annulatus* and *Boophilus microplus*, from the United States. The cattle tick is a serious pest of warm-blooded animals, causing injuries and death of livestock, wildlife, and domestic animals. The USDA is authorized under 7 CFR Part 2.80 to exclude, control, and eradicate pests such as cattle ticks that serve as agents of animal disease. The EA, incorporated by reference in this document, is available from:

USDA, APHIS, VS
4700 River Road, Unit 41
Riverdale, MD 20737-1231

The EA for this program analyzed alternatives of (1) no Federal action, and (2) Cattle Fever Tick Eradication Program (the preferred alternative). Both of these alternatives were determined to have potential environmental consequences. APHIS selected the Cattle Fever Tick Eradication Program alternative because of its ability to eliminate destructive tick populations with a minimum of potential environmental consequences. Negligible impacts are foreseen to human health for the preferred alternative. Minimal impacts are expected to the physical environment and nontarget species. Protection measures will be applied as needed to prevent potential adverse effects to endangered and threatened species and their habitats. APHIS will consult about trail maintenance and other program activities on a site-specific basis, as necessary, with the U.S. Department of the Interior, Fish and Wildlife Service.

I find that implementation of the proposed program will not significantly impact the quality of the human environment. I have considered and based my finding of no significant impact on the anticipated environmental consequences of the proposed program as presented in the associated EA and on my review of the program's operational characteristics. In addition, I find that the environmental process undertaken for this program is entirely consistent with the principles of "environmental justice," as expressed in Executive Order No. 12898 and that this program poses no disproportionate adverse effects to any minority or low income populations. Therefore, I find that no additional environmental documentation need be prepared for the present program, and that the program actions may proceed.

/S/
Dr. Phillip A. Pickerell
Area Veterinarian-In-Charge
Veterinary Services

6/6/00
Date